

REMARKS

Claims 1-20 are pending in the Application. Claims 13-20 have been added. No new matter has been added. Entry of the amendment is respectfully requested. Reconsideration is respectfully requested.

Claim Status

Claims 1, 6, and 8-11 were rejected under 35 U.S.C. § 102(b) over Heinz (US 3,917,125).

Claims 2-5 and 12 were rejected under 35 U.S.C. § 103(a) over Heinz.

Claim 7 was rejected under 35 U.S.C. § 103(a) over Heinz in view of either Potier (US 4,040,469) or Shima (US 4,430,121).

The 35 U.S.C. § 102(b) Rejections

As best understood, the Action alleges that Heinz teaches a shell (screen 16) having an opening (screen pores; col. 2, lines 52-53), and flux in Heinz's melt.

The Applicant respectfully traverses the rejections. Heinz does not anticipate the claims.

For brevity the Applicant does not necessarily present herein all of the reasons as to why Heinz does not anticipate the claims. Nevertheless, Applicant's remarks are sufficient to show that Heinz does not teach every feature and relationship arranged in the manner recited in the claims, as is required to sustain the rejections. Applicant reserves the right to later present even more reasons negating the allegation of anticipation.

Claim 1

Where does Heinz teach "fibrous refractory material"? Heinz teaches that the entire assembly (10), which includes the container (12) and the screen (16), is of "pure platinum metal" (e.g., col. 2, line 8). As Heinz does not teach the recited shell of step (a), it follows that Heinz

also cannot teach steps (b) and (c) (which include "the shell"). Heinz does not anticipate claim 1. Nor does Heinz anticipate the claims that depend from claim 1.

The Dependent Claims

The Applicant respectfully traverses the rejections of the recited dependent claims. The applied art also does not teach or suggest the dependent claims. Each of the dependent claims depends directly or indirectly from an independent claim. The Applicant has shown the independent claims to be allowable. Thus, it is asserted that the dependent claims are allowable on the same basis. Furthermore, each dependent claim additionally recites specific features and relationships that further patentably distinguish the claimed invention over the applied art.

To establish inherency in a reference the Office must prove through citation to prior art that the feature alleged to be inherent is "necessarily present" in the reference. Inherency may not be established based on probabilities, possibilities, or assertions. *In re Robertson*, 169 F.3d 743, 49 U.S.P.Q. 2d 1949 (Fed. Cir. 1999).

With regard to claims 2-5 and 12, the Action admits that Heinz never teaches or suggests having molten metal. The Office has not provided evidence that all liquid phase epitaxy (LPE) systems (like Heinz's system) require molten metal. The record is absent the evidence necessary to support the Action's assertion of molten metal in Heinz, and is based on pure speculation. It follows that the rejection lacks substantial evidence support. *In re Zurko*, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001). Nor is the determination of patentability in the Action based on evidence of record. *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002).

Also, with regard to claim 7, the Action admits that Heinz never teaches or suggests having a ceramic material. The Office has not provided any evidence of substituting a ceramic

material for platinum, especially in an LPE system. Nor has the Office provided any evidence that Heinz's specific LPE arrangement can use a ceramic material instead of platinum, as alleged. Conversely, Heinz specifically teaches using pure platinum metal for its many advantages, including its ability to withstand the highly corrosive environment and not contaminate the materials utilized in the LPE system. Applicant challenges the Office's assertion and request concrete evidence of record that Heinz's specific LPE system can use a ceramic material instead of the platinum, as alleged. *In re Zurko*, supra. *In re Lee*, supra.

Applicant respectfully submits that it would not have been obvious to one having ordinary skill in the art to have modified Heinz to have used a ceramic material instead of the disclosed platinum, as alleged. Ceramic materials were known at the time of Heinz's invention, yet Heinz chose platinum because of its advantages that are critical to the operation of Heinz's system.

The alleged substitution of a ceramic material for the disclosed pure platinum (if it were somehow possible, which it isn't) would be directly contrary to Heinz's explicit teaching and would destroy the disclosed and desired utility and operability of the Heinz teaching. That is, the alleged modification to Heinz would render the reference inoperable for its intended and desired purpose. An obviousness rejection cannot be based on a modification if making the modification would result in destroying the utility or advantage of the device shown in the prior art reference, which is the current situation. Note *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1598-99 (Fed. Cir. 1988).

The attempts to modify Heinz are clearly attempts at hindsight reconstruction of Applicant's claimed invention, which is legally impermissible and does not constitute a valid

basis for a finding of obviousness. *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992). The rejection, which lacks the necessary evidence and rationale, is based on knowledge gleaned only from Applicant's disclosure.

The Applicant respectfully submits that the rejections are based on assertions rather than factual evidence of record. The Applicant is not required to prove patentability. Conversely, it is the Office which must first establish a *prima facie* case of obviousness under the law. Otherwise, the Office is legally required to grant a patent.

The references, taken alone or in combination, do not teach or suggest the recited features and relationships. Nor has the Action established a *prima facie* case of obviousness.

Conclusion

Applicant respectfully submits that this application is in condition for allowance. The undersigned is willing to discuss any aspect of the Application by telephone at the Office's convenience.

Respectfully submitted,



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